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Cc: []

From: CN=Bruce Herbold/OU=R9/O=USEPA/C=US

Sent: Tue 4/3/2012 11:14:31 PM

Subject: Fw: soliciting feedback

Anke Mueller-Solger

www.water.ca.gov/iep

www.deltacouncil.ca.gov/delta_science_program/

here's Anke's feedback.

Bruce Herbold
USEPA Fish Biologist
(415) 972 3460

"If 90% of the ideas you generate aren't absolutely worthless, then you're not generating enough ideas". --
Michael Artin

----- Forwarded by Bruce Herbold/R9/USEPA/US on 04/03/2012 04:11 PM -----

From: "Mueller-Solger, Anke@DeltaCouncil" <anke.mueller-solger@deltacouncil.ca.gov>
To: Bruce Herbold/R9/USEPA/US@EPA, "Enright, Chris@DeltaCouncil"
<Chris.Enright@deltacouncil.ca.gov>, "Grober, Les@Waterboards" <les.grober@waterboards.ca.gov>,
"tsommer@water.ca.gov" <tsommer@water.ca.gov>
Date: 03/30/2012 12:41 PM
Subject: RE: soliciting feedback

Bruce, my responses are below. Sorry it's totally of the top of my head & a bit in short-hand, I'm in a hurry
(because I really need to work on my MAST assignments, among other things!!!) Anke

Anke Mueller-Solger
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Views expressed in this e-mail are my own and do not necessarily represent the views of the Interagency
Ecological Program or the Delta Stewardship Council.

From: Bruce Herbold [mailto:Herbold.Bruce@epamail.epa.gov]
Sent: Friday, March 30, 2012 11:34 AM
To: Mueller-Solger, Anke@DeltaCouncil; Enright, Chris@DeltaCouncil; Grober, Les@Waterboards;
tsommer@water.ca.gov
Subject: soliciting feedback

I would more than welcome any feedback on the Tuesday workshop.

Was it useful? Probably (unless politics get in the way, somehow), but proof is in the pudding – what will you & State Board actually do with this? & what does this mean for the rest of us? FYI, Stephen M asked BJ & me yesterday for grad student support “to work on updating X2-Q.” I’m of course in favor of this (since I myself suggested that this is needed) and suggested that this should also involve Alan J (who already said he’s interested) and perhaps Wim K & Marc S & Michael MacW as a steering committee or something. This in itself could be a useful outcome of the workshop.

What did you get out of it? We still need to know more about the historical annual “halograph.” Not to recreate it, but for a better sense of what native species might have been adapted to, similar to the “natural hydrograph” (a concept that apparently came under lots of fire at yesterday’s DSC meet which I didn’t watch). It also reinforced my sense that we should be looking at (& regulating) X2 more on an annual basis & for multiple species and clearly consider trade-offs. Trade-offs between what’s “best” for various purposes and what’s possible given all current demands, an altered landscape, etc. Interestingly enough, the NRC said quite a bit re trade-offs in its latest report. I agree with them. To do this quantitatively, we probably need better collaborative & integrative modeling approaches. I liked the “sociology” caveats about modeling exercises apparently voiced in one or more groups at the workshop (not in my group) if I understood what Steve C said correctly. We need to understand these caveats, but we also need to do the modeling.

Where might it lead? Year-round X2 considerations/regulations. Trade-off modeling (quantitative & qualitative) & “real” effects analyses considering a fuller range of alternatives (including extremes). Incidentally, the NRC also had a bunch to say about this. E.g. p 36: “In the face of all of these ecological and environmental constraints, an effective system of planning and management will need to consider a broader array of alternatives and options for managing water than has been characteristic of the past. Perhaps more importantly, all Delta and export water users will need to more generally acknowledge that water scarcity is a fact of life.”

Were there things that the Delta Science Program would want to pursue? Probably (but I don’t speak for DSP). Most likely on the modeling front, but also in other areas via PSPs. Chris mentioned digging out the “modeling letter.” I could also see some of this playing into “performance measures” which is something Lauren (or more generally Delta Plan/DSC) is very interested in, along with many others (esp ERP). I bet Peter G would have his own ideas.

Were there things IEP should pursue? Participate in the collaborative conceptual & quantitative modeling exercises mentioned above. Find a new home for Dayflow. Continue providing monitoring data, perhaps with additional “routine” endpoints that might be related/relevant to X2/its effects (eg fish health). Improve our web-based data & info communication. Pursue mechanistic studies about year-round X2 effects that could inform trade-off modeling. I also think we are on a pretty good track with our current MAST & FLASH exercises. I happen to like the FLASH AMP – CMs coupled with/leading to clear hypotheses/predictions. We could/should more of the same (for other critters, seasons). I think the new DS CM & report cards could be really useful for further considerations of the effects of X2 versus other drivers/stressors on fish (& possibly other critters). They are seriously species-centric though. That’s fine because the ESA is a major driver for us, but I’d still like us to go further down the ecosystem route, regime shift and all, too.

thanks for whatever thoughts you care to share, and thanks for your involvement Tuesday.

Personally I am jazzed that we brought together and had a productive discussion amongst the scientists and engineers that can propel a quantitative, ecosystem view of the upper estuary. But then I am always little Mary Sunshine, when I’m not reviewing BDCP docs.

Bruce Herbold
USEPA Fish Biologist
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